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INVESTMENT OPPORTUNITIES

in

SOUTH CENTRAL ALASKA

Prepared for ARA by Economic Associates, Inc.

and William P. Rock Associates

under a technical assistance contract

March 1965

U.S. DEPARTMENT OF COMMERCE

John T. Connor, Secretary

Area Redevelopment Administration

William L. Batt, Jr., Administrator

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FOREWORD

The basic responsibility of the Area Redevelopment Administration of the U.S. Department of Commerce is to help revitalize the economies of American communities suffering from chronic unemployment and underemployment.

One way of assisting a community is to determine the kinds and the magnitudes of its economic problems and the possible solutions. ARA helps do this through its Technical Assistance program.

This publication is a product of a technical assistance contract with Economic Associates, Inc. and William P. Rock and Associates. Mr. Rock participated in the field survey and in the preparation of preliminary drafts of Fairbanks, Valdez and Cordova. Mr. George Perazich, of Economic Associates, directed the project, prepared drafts of all other communities and wrote the final report.

This study cites promising investment opportunities in the south central Alaska area and recommends projects which could assist individual communities in creating new jobs to take up the economic slack expected after the post-earthquake reconstruction program terminates. It could be of value to investors seeking areas of opportunity, as well as to any area seeking to improve its economy.

William L. Batt, Jr., Administrator
Area Redevelopment Administration

SECTION I. SUMMARY AND RECOMMENDATIONS

This report summarizes certain findings and recommendations which were developed during the 3-week field survey of South Central Alaska by a two-man team in September of 1964. The purpose of this survey was to identify promising investment opportunities in this area, establish the rationale for each project, and recommend those projects which could assist individual communities in creating new jobs to take up the expected slack after the post-earthquake reconstruction program had been completed. (The earthquake occurred March 27, 1964, resulting in 114 deaths and \$750 million damage.) Initially, six communities were selected for study, but at the request of local officials visits were made to several others.

Introduction

After conferences with several business, banking, and shipping leaders in Seattle, and similar meetings with government officials in Juneau, each of the communities was visited and extensive discussions were held with city officials, business men, labor leaders, bankers, and prospective investors in local enterprises. Some of these were group conferences, some were informal talks with specially-designated committees, but most often the discussions were held with selected individuals. Frank opinions were sought from each participant regarding economic problems in his community, and his recommendations for new industries, ports, services, and other facilities were carefully examined. Background data were collected from state and Federal officials, who were also helpful in providing general information about the local economy.

In all these discussions emphasis was placed on restoring the economic activities destroyed or damaged by the earthquake, as well as creating new jobs in industries which did not exist before, but which, because of favorable resources or markets, would have an opportunity to grow and thus add to local employment. In discussions with local officials and business men, promising investment opportunities in relatively small, short-range projects were especially stressed, because it was felt that these could be started quickly and would not require large amounts of scarce capital and time for

their practical realization. Altogether, about a hundred individuals participated in these discussions, during which the merits and shortcomings of several dozen projects were examined.

Summary

Reconstruction activity was in evidence in each city and town visited. Most of the rebuilding contracts were financed by the Federal disaster relief funds available under Public Law 875. First priority was given to projects for restoring essential public services, most of which were well under way. But throughout the region the most frequent need for new or expanded facilities to which local officials and business leaders referred was more fish freezing and cold storage plants. Considering that a good portion of the entire state is covered with snow and ice, this interest in "ice boxes" was quite surprising to the survey team. Yet, as will be explained in more detail in the sections to follow, since fishing is one of Alaska's leading industries, lack of sufficient freezing and cold storage facilities is by the same token one of the serious problems inhibiting its economic growth.

Construction of freezing and cold storage plants, both shore-based and floating types, together with the development of new technologies for packaging, transportation, and marketing of salmon and other sea food products, is one of the highest priority problems that must be solved in the immediate future. Expansion of docking facilities to accommodate the expected growth of sea food processing industries is another critical need for a number of the communities surveyed. Small-boat repair yards are also needed and would contribute significantly to the stability of the fishing industry.

Next to fishing, agricultural development commands the next order of priority, but lumber and fur industries also appear to have considerable potential for growth in some communities. With the newly discovered natural gas in the Kenai peninsula and Cook Inlet areas, such energy-dependent activities as cement production, greenhouse gardening, and fertilizer making might take on added feasibility. Better marketing methods, and improved quality control to meet FHA specifications on the part of local lumber mills would be of considerable help in stimulating the growth of

this industry. With the enormous timber stands in South Central Alaska there should not be any need to import construction lumber from the Pacific Northwest, as is being done at present. In general there are a great many "small things" that could be done to reduce both the cost of living and of construction, and to avoid paying some of the large transport costs involved in all imported products.

Recommendations

As will be seen in Section III of this report, many specific recommendations are made for each community. Their employment-creating potential in the post-earthquake reconstruction period will, of course, vary considerably. Moreover, our major assignment was to establish the rationale and identify promising investment opportunities, but all of the suggested projects must be carefully studied with respect to their economic feasibility. To acquaint the reader with the nature of these projects and their recommended order of priority we list them below numerically under each community:

Anchorage:

1. Expansion of local port facilities.
2. Development of a feed- and fertilizer-mixing plant.
3. New trading facilities at the International Airport.
4. Construction of a portland cement plant in the Tyonek Village area on the Cook Inlet.
5. Organizing a firm of business consultants.
6. Development of a fur processing and wholesaling center.
7. Greenhouse for tomato growing.

Palmer:

1. Construction of a food freezing plant.
2. Organizing a corporation for large-scale hay raising.

Fairbanks:

1. Development of electronic parts manufacturing and servicing operations.
2. Constructing a center for Alaska's Centennial Celebration in 1967.
3. Development of a small gold mining enterprise.

Valdez:

1. A new sea food freezing plant to use the most advanced technology.
2. A floating small-boat repair shop.

Cordova:

1. New city-owned cold storage facilities
2. Improvement and expansion of the local machine shop.

Seward:

1. New sea food freezing plant.
2. Barite processing operation.
3. Specialty food processing.

Kodiak:

1. A new passenger ferry dock.
2. Modern small-scale beef slaughtering facility.
3. Expanded municipal pier.
4. A small-boat repair yard.
5. A marine sciences research institute.

Kenai Peninsula:

1. A new saw mill.
2. A greenhouse for tomato growing.
3. Fish freezing and cold storage plants, either new or expanded.

SECTION II. THE ROLE OF SOUTH CENTRAL REGION IN THE ALASKAN ECONOMY

Like many other large geographic areas which stretch over several time zones, Alaska is not an economic entity, but is composed of several economically independent regions. There are also great variations in climate, in material resources, and in proximity to outside markets. While, as the saying goes, every one of the 250,000 Alaskans can have "his own river, lake, mountain, fjord, and ten acres of glacier," over an area of more than half a million square miles, there is a considerable unevenness in the distribution of these and similar resources.

General Characteristics

As we see it, Alaska's small population, its climate, and remoteness from world markets are its greatest impediments to economic growth. Climatic conditions have largely caused the concentration of population in two major areas. Both the South Eastern and South Central Regions, in which perhaps nearly three-fourths of all the people in the state live, are located along the coastline, which is washed by the warm Japan Current and therefore has a climate more amenable to economic activities than that of areas further to the North.

Despite many basic differences between regions in climate, distances, and resources, their economies have certain striking similarities. All areas, from Ketchikan to Nome, depend heavily on Federal payrolls. Approximately 48 percent of Alaskans derive their livelihood directly from Federal civilian and military activities. Counting the indirect benefits, such dependence is estimated to be close to 80 percent.

Another striking similarity between regions is that nearly all economic decisions are made outside the state, either in Washington by various Federal agencies, or in Seattle or San Francisco by business, shipping, and banking interests. Decisions to reduce or increase the very substantial military personnel in the area, or the number of civilians in the Bureau of Indian Affairs, Federal Aviation Agency or other agencies can have a drastic effect on Alaska's economy. Economic decisions made by the preponderantly absentee ownership of oil, copper, timber, paper, fishing, and fish-processing enterprises can similarly affect the economy.

As a result of such outside influences there appears to be a shortage of the kind of dynamic local entrepreneurship found elsewhere in the United States and considered essential for stimulating economic growth. Except for the high wage rates, caused in part by strong unions and by highly seasonal activities, the operation of Alaska's economy is reminiscent of that of a semi-colonial country.

Another serious obstacle to economic growth, partly deriving from lack of local decision making, is the lack of permanence. There is a large turnover of people. Many go to Alaska as seasonal workers. While a few of these remain, most do not. More than a third of all "peak-month" fishermen and well over a half of the salmon cannery workers, for instance, are residents of the Pacific Northwest. Even the old Alaska residents, we were told, maintain their cemetery plots "back home in the States." Because of the constant departures, and arrival of new people, the makeup of nearly all the civic and business committees changes so frequently that lack of continuity presents a problem.

The South Central Region

1. Population

The general characterization of the entire state given above applies equally to the South Central Region. The Anchorage Metropolitan Area and the other communities covered by this study (not including Fairbanks) had over 120,000 people in the early fall of 1964. The total regional population is estimated at close to 140,000 or about 56 percent of the state's total. Moreover, between 1960 and 1964, this area's population has grown by about 20 percent, as against less than half this amount for the state as a whole.

2. Resources

Many of the major coal resources and some 27 percent of the estimated prime hydroelectric power potential are found in South Central Alaska. Major oil and gas fields, as well as large deposits of iron ore, are also located in this area. The richest agricultural land and some of the principal sea food resources provide other economic advantages. Although the region

possesses large forest resources, they are minor in comparison with the enormous timber stands of the South Eastern area.

3. Major Products

Nearly 80 percent of all mineral output in the state and a similar proportion of the state's food output are produced in the Anchorage area, but only about 5 percent of Alaska's timber production comes from the South Central region's forests. Of some \$97 million of the state's fish products in 1960, more than \$41 million came from this region; and of 2.6 million cases of canned salmon pack in the state as of September 13, 1964, about 1.1 million were produced in that area.

4. Prospects for Future Growth

As has been often emphasized in previous studies, the development of mineral, hydroelectric power, and timber resources holds promise for long-term economic growth. But what is frequently overlooked is that these are largely extractive industries, which would create relatively few jobs. For example, exports of liquefied gas to Japan or establishment of a large-scale iron-ore reducing facility in the Cook Inlet area, using natural gas, with the output also destined for export, would likely bring in substantial income to Seattle or San Francisco business firms, along with some income to Alaska. However, since these are largely mechanized industries, new local job opportunities would be limited.

The question is often asked, and seldom answered, as to whether the exploitation of mineral, power, and timber resources would in fact be able to compete with those of other areas serving the same markets, so as to make their development in Alaska attractive to potential investors. Because of the huge investments that would be needed, and the considerable lead time required for completing such large facilities, it is felt that, for short-term economic development, other types of projects should be emphasized. In the words of a keen observer of the local scene, with whom we agree, "What Alaska needs for its short-term economic growth is not the Rampart Dam or other equally grandiose projects which require huge capital outlays and take years or decades to complete but a great variety of small projects that can be quickly started and completed and require relatively small investments."

The recent discoveries of natural gas introduce a new element into the economic planning of this region. Natural gas offers potentially low-cost fuel that can be used to a considerable degree to offset the climatic difficulties. Such new technologies as the construction of buildings under large gas heated plastic tents, successfully tried in Anchorage, should be further developed. Availability of low-cost natural gas could stimulate local cement production and thus substantially lower the cost of construction. It could also assist in the development of a local fertilizer industry and in other agricultural operations. There are, no doubt, other applications of natural gas which could stimulate small manufacturing activities in the area, such as small ceramic plants and similar endeavors. There does seem a genuine need in South Central Alaska for the development of new technologies to utilize more fully its natural gas potential. A study of this problem is recommended.

In line with the "need for a variety of small projects that require modest investments" and can be completed in time to take up the expected slack in employment opportunities after the post-earthquake reconstruction has been completed, we have identified some of these projects. They are briefly described in the following pages for each of the communities covered by this study.

SECTION III. INVESTMENT OPPORTUNITIES IN SELECTED COMMUNITIES

While the development of such major South Central Alaska resources mentioned in the preceding section, such as oil and gas, iron ore, and timber, can in the long run have an important impact on the economic growth of this region, our major task here is to identify the short-run problems and suggest investment opportunities which might be realized within the next two to three years. Creation of new job opportunities to take up the expected slack in the post-reconstruction period is the immediate need for the communities damaged by the March earthquake.

In this section, the extent of such damages, as well as recent reconstruction efforts, will be briefly described. Recent trends in the local economy will also be described and impediments to future growth identified. From among many investment opportunities suggested by public officials and business executives in each community visited, those that appear to offer the greatest stimulant to economic growth will be systematically examined in this section. Individual projects are numbered and described according to their priorities.

Anchorage

In mid-1964 the greater Anchorage area had about 100,000 people representing roughly 40 percent of the state's population. It is the fastest growing region in the state, as well as its major commercial and banking center. The area was damaged seriously by the last earthquake, with the major destruction of its central business district along Fourth Ave. in the K-L Street area. One hundred commercial buildings were destroyed and many others severely damaged and 95 percent of the high-rise apartments had to be condemned. Damages to water, sewer, power facilities, and other public utilities were estimated at \$31 million; to streets, ports, and other transportation facilities, \$13 million; and to city-owned public buildings, another \$11 million.

At the time of our visit in mid-September most of the damaged areas were cleared and much new building construction and repair were in process. With substantial Federal disaster-relief funds available under Public Law

875, the local economy was buzzing with activity and there was an air of prosperity and affluence in the region. But there was also a concern for the future. The recent reconstruction activities have attracted hundreds of new construction workers to the area, some of whom will probably remain in the community after the reconstruction activity has been completed. These will aggravate the area's own long-term unemployment problem because as of April 1964, nearly 10 percent of the area's civilian work force of 30,000 was unemployed. Further, the recent growth of military and defense establishments has been tapering off and there are indications that some of these activities may actually begin to decline in the near future.

To assist the area in meeting future job requirements by suggesting new business opportunities, interviews were conducted with some two dozen individuals representing public, labor, and business organizations. In discussing various manufacturing, commercial, and service possibilities, every effort was made to identify projects which can be started and completed in a relatively short time, require only modest investments, and have certain competitive advantages in the area, so that they appear to offer fair return to potential investors. As indicated earlier in this report, the supporting facilities of the rapidly growing oil and gas industry will come more or less automatically without requiring extensive promotion and, while important, are not emphasized here. Among the many additional projects considered for the Anchorage area the following appear to represent promising investment opportunities.

1. Port Facilities

A planning study by an engineering firm for the expansion of Anchorage port facilities is now under way and the final report and recommendations are expected to be completed by the end of 1964. Two types of facilities are being considered: a) construction of a permanent petroleum unloading installation and b) extension of the dry-cargo pier for about 300 feet to accommodate another ship when needed, especially for use of the oil-drilling boats operating in the Cook Inlet area, which need occasional docking to take on supplies and equipment. This extension is also required to alleviate present queuing in the harbor for dock space. The Sea-Land Shipping Company,

which has recently chosen Anchorage as a port of call, according to local port operators, expects to keep the harbor free of ice on a nearly year-round basis, thus substantially enhancing its value. Total cost of this port expansion is estimated at about \$2 million, which is expected to be financed by Federal grants.

Expansion of port facilities could stimulate economic development of the entire metropolitan area. Even in its present shape the dry-cargo tonnage handled by Anchorage port has been rapidly expanding, from 38,000 tons in 1961 to an estimated 350,000 tons in 1964, and is projected at about 550,000 tons in 1965. With the recent completion by leading oil companies of two new tank farms in the port area, the volume of petroleum products handled by existing facilities has also risen from 1.4 million barrels in 1963 to an estimated 4.8 million in 1964. According to the port director, total revenues also rose from about \$450,000 in 1963 to an expected \$760,000 in 1964. The contemplated expansion would considerably increase the volume of goods which could be handled by this municipally-owned facility, and is expected to create between 20 and 30 additional jobs in the dock area alone plus many others in trucking and servicing operations.

Since Anchorage is expected to take over a considerable portion of ocean freight formerly going through Seward and Whittier, and as the fastest growing area in the state has considerable potential for wholesale trade as well as for movement of feed and agricultural chemicals to the Matanuska Valley farms, it appears that this port expansion will stimulate economic growth of the entire South Central region. As the economy grows it will be expected also to generate return cargo for the ships now bringing in supplies from the outside. While its operation is now only nearing the break-even point, in time the port could become an important income-producing facility for the city. Both the city manager and the port commission are behind these port improvements. We recommend favorable consideration by appropriate public agencies in securing funds for the port expansion.

2. Feed- and Fertilizer-Processing Facilities

This type of enterprise should also be located in the Anchorage port area to serve principally the Matanuska Valley farmers, but also eventually the Kenai peninsula region, where agriculture is expected to grow rapidly. Except for hay, practically all the cattle and poultry feed, as well as chemical fertilizers, now consumed in the South Central region are imported in bags from Seattle and sold to the consumers at much higher costs than those charged Washington State farmers. Both handling costs and freight rates add as much as 50 percent to the Seattle price level, so that Alaska dairies and egg producers have difficulties in competing with imported milk and eggs sold on the local market.

These high feed costs are an important impediment to the growth of egg and milk production. A local feed mill and mixing plant would in all likelihood reduce such obstacles and expand production of these products. Properly financed and managed, such an enterprise could import bulk grains and other ingredients, as well as utilize the very substantial local calcium and protein sources, like crab shells and other fish by-products, to prepare low-cost poultry and cattle feed. Although it is realized that the present market could support only a relatively small feed mill, the demand should expand rapidly as costs are lowered. At present only about 10 percent of all food consumed in the Anchorage area is raised there, so that opportunities for agricultural growth are substantial.

By combining the feed-processing facilities with those for mixing fertilizers - where handling, storage, utilities, and certain other operations might be performed by the same equipment - additional economies of scale are possible. Currently, bagged fertilizers, containing at best 30-40 percent of plant food, are imported. It should certainly reduce the cost to local farmers if, instead, anhydrous ammonia containing 80 percent of nitrogen plant food were imported in pressurized tanks. It could either be stored and distributed in this form or in bags when mixed with local fillers. This in turn would enable them to compete more successfully with imported products. Distribution of agricultural lime, which could be produced in con-

nection with the proposed cement plant at Tyonek, might also be added in time. Eventual production of ammonia from local natural gas is another possibility. A feed- and fertilizer-processing operation combined with wholesale distribution may offer an attractive investment opportunity. A more detailed feasibility study of this project is recommended.

3. New Trading and Promotional Facilities at the International Airport

The passenger traffic at the airport, which is served by several international air lines using the Polar route, has been rapidly growing and in 1964 was expected to reach the half-million mark. Frequent stop-overs of business and government officials from both European and Asiatic countries, and especially the recent influx of the Olympic athletes going to and from Tokyo, has caused the city of Anchorage to plan the creation of new and improved airport facilities. There is an active airport committee which, among other things, is attempting to promote a "Reception Center" and a series of exhibits called "Hall of States" for the purpose of introducing international travellers to the U.S.A. Thus far the emphasis has been placed on public relations which is useful and should be supported.

But we believe that the improvements in airport facilities could be broadened to include new business activities which would stimulate the local economy and also advertise the resource potential and other business opportunities in the state. Since many of the international travellers after some 7-8 hours in flight may desire to stop over night at the airport, hotel or motel facilities are needed. These, together with food and drinking establishments, would offer attractive business and employment opportunities. With the expanded gift shops, luxury-type goods stores, Alaskan art and souvenir items, etc., the possibilities of extending free-port privileges to international passengers purchasing tax-free liquor, jewelry, textiles, and similar items should be examined, because these could also be developed into substantial new businesses. Wider advertising of current privileges offered by some foreign airlines for off-season, round-trip fares from eastern U.S.A. areas via Alaska to Europe and back across the Atlantic, for only a small addition in cost over what the same trip would cost both ways to Alaska, would stimulate tourist trade.

For advertising economic development opportunities of the state, a prominent place in the "Hall of States" should be devoted to exhibits of Alaskan resources. Foreign visitors should be encouraged to ask questions of a well-informed staff and learn more about prospects for Alaskan business and industry. We recommend that the city of Anchorage prepare a feasibility study of different economic development opportunities in the expansion of its airport and request its planning department to make a preliminary sketch design of the desired facilities. With such a design and an attractive prospectus, the promotion of the project could be undertaken and firm commitments obtained from business enterprises and government agencies to build or rent space in the new airport facilities.

4. Portland Cement Plant

A feasibility study for a cement plant in the Anchorage area is now under way by the engineering and economics departments of the University of Alaska. Preliminary results show that currently the state consumes approximately one-half million barrels of cement per year, which is just about the threshold for a unit of a minimum economic size. With the recent discoveries of natural gas along the Cook Inlet, this feasibility study is expected to show that a modern plant located near the wellhead can produce cement at costs comparable to those in the Seattle area. Because of the heavy transportation costs which raise Alaskan cement prices by more than 60 percent above those in Seattle, the contemplated plant appears to represent an attractive investment opportunity. Some \$4-5 million is expected to be needed for a plant of 800,000 to 1,000,000 barrels annual capacity. By reducing the cost of the cement needed for building roads, stores, factories, and homes, not only would such a plant provide 200-300 direct and indirect jobs with an annual payroll of \$1.5-2.0 million, but it would considerably stimulate general economic growth.

Tentative location for the plant has been selected in the Tyonek village area on the Cook Inlet, adjacent to available limestone deposits and only 10-15 miles distant from operating gas wells. With special port facilities, such a plant could use low-cost barge transport to distribute its products to the Anchorage area - only about 40 miles distant - and from Anchorage by

rail northward to Fairbanks. The entire South Central region could also be served from this contemplated site by low-cost water transport.

Since lowering of construction costs would tend to stimulate new building programs, this proposed cement plant could be an important factor in the growth of Alaskan economy. Local groups currently interested in developing this project appear to possess technical capability in the design and construction of the plant but lack operating and marketing experience. In the past the Permanente Cement Corp. of California, which operates large distribution facilities at the port in Anchorage, has expressed interest in constructing a cement mill in Alaska and a combination of Permanente and local interested parties should be given serious consideration.

5. New Business Services

According to the information obtained in our survey, the entire South Central area has but one business consulting firm, staffed by only one man and specializing principally as financial advisor to the Alaskan State Development Commission and to various municipal governments. Yet with recently acquired statehood, and with the needed emphasis on development of new local enterprises, of activities related to oil and gas resources, of Japanese trade, and of other emerging economic opportunities, the requirements for new business and economic advisory services are quite substantial. What appears to be needed most is a firm of economic and business consultants who would make their services available both to local business and industry and to government agencies. Staffed by an experienced business economist with one or two junior assistants, such a firm should be able to perform various marketing and feasibility studies and develop the project prospectuses needed for urban planning, industrial promotion, and for obtaining investment money. It should also develop and help assemble the governmental and private economic data normally required in a rapidly growing under-developed area. Excluding the large, omnibus-type studies which will continue to be performed by outside consultants, the estimated annual value of business for such a local firm might initially range between \$50,000 and \$75,000 with considerable growth potential.

We are of the opinion that a private firm with experience in, and emphasis on, practical business and governmental problems would best suit the present needs of the Anchorage area. But an institute-type organization linked with the University of Alaska and staffed with at least one full-time person experienced in applied economic research might also meet the requirements. While, because of predominance of Federal agencies, we were told that Anchorage ranks only after Washington, D.C., in ratio of college degrees per 1,000 population, it nevertheless has a serious shortage of "know-how" in practical matters of economic development and business management.

6. Fur Processing and Wholesaling Center

This is another resource-oriented industry which would seem to favor an Anchorage location, preferably near the International Airport. It appears that it could be developed into a profitable enterprise, subject, of course, to a detailed feasibility study to determine both the scale of operation and cost of production and marketing. As in the case of the feed and fertilizer enterprise described above, this establishment would also need to combine, at least initially, the processing and wholesaling operations. The collection of raw furs and marketing of the finished products are its most important elements.

From an initial survey of the availability of fur-bearing animals and of fur markets, determination should be made with regard to the types of furs that should be handled. The next step would be the organization of collection points, as well as of native trappers and hunters, and the setting of prices, standards, and specifications for the type of animals to be trapped. Once the skinning facilities under skilled supervision have been organized at the major collection points, arrangements could be made with local airlines to bring the furs to Anchorage. Since most airplanes return empty, favorable freight rates should be possible and special small craft which can land on the many lakes in the area might even be used to pick up loads at the less accessible stations. On a small scale, and based on seal skins, this practice is already in use. Eventually fur farms might also be considered, to take advantage of the favorable climate.

Tanning and other operations should be done in modern facilities located in Anchorage, in accordance with the highest standards required by leading fur markets. A study of Canadian and Russian experiences would in all probability be useful. With modern equipment and expert management, fur processing as such should not present serious difficulties.

For successful operation of a local fur industry, marketing and distribution are most important. Arrangements for handling Alaska furs must be made at the outset with the distributors in all major fur-market centers. Some distributors may be invited to participate as shareholders in an Alaskan fur enterprise, contributing both capital and expertise to a competent marketing and promotion organization. With the growth of the fur business and with imaginative promotion efforts, Anchorage could become an outstanding fur auction and style center. Some elements of such an operation are already in existence but are apparently carried on on a very small scale and without expert management. What is required is investment funds and experienced management to pull together present efforts and establish a solid basis for growth. With a worldwide market for furs and excellent air freight connections with leading U.S. cities, these are the type of exports where Alaska's remoteness becomes relatively unimportant. With careful planning, opportunities for profitable investment in such a project seem to be promising.

7. Greenhouses for Tomato Growing

Because of the short growing season tomatoes cannot be raised outdoors in the Anchorage area and are imported at a cost to the housewife of about 50 cents per pound. Assuming the average annual U.S. consumption of 13 pounds per capita, the potential market in this metropolitan area comes to 1.3 million pounds. According to present greenhouse practice in the Cleveland, Ohio, area, and with a fall and a spring crop only, to raise this quantity would require some 10 acres of land under glass.

We suggest a project of one acre under glass or plastic cover with two crops annually. According to estimates furnished us in Alaska, this would produce roughly 250,000 pounds of tomatoes or about one-fifth of the potential demand. With recent natural gas discoveries in the area and with

negotiated bulk-use prices, heating costs may not be excessive. Even assuming double labor rates and quadruple fuel costs in comparison with Ohio, each of these two items would represent less than 10 percent of the selling price. With an estimated investment of some \$200,000 for structures, heaters, and other equipment, and interest at 8 percent, the labor, fuel, and capital charges would come to about \$60,000 per year or about 25 cents per pound. If tomatoes were sold to retail outlets at 35 cents per pound, there would still remain a margin for local distribution and profit of 10-15 cents per pound. With artificial lighting the yield and the profit might be increased. An additional profit could also be derived from raising setting plants for late spring plantings by local farmers, thus further increasing local tomato supplies. Including distribution, the greenhouse would employ 8-10 people. We feel this project represents an interesting business opportunity and warrants a detailed feasibility study by prospective investors.

Palmer

Located in the Matanuska Valley some 50 miles northeast of Anchorage, Palmer is the major agricultural center in Alaska. In April 1964 the city's population was estimated at 1200 and that of its larger trading area at about 5200. As was the case with Fairbanks, this town was not damaged by the March earthquake. However, it has been included in this study because its economy is closely related to Anchorage markets. According to data supplied by the Alaska Employment Security Division of the State Department of Labor, in August 1964 total employment in the Palmer labor market area (not as large as the trading area) was about 2000, of which some 1300 were engaged in non-agricultural activities. Of these, nearly 500 people were working in various governmental agencies, including the well-staffed U.S. Agricultural Experiment Station and similar state and Federal activities, a little over a hundred each in coal mining and transportation, and over 200 in construction. Unemployment was at a very low level. Most of the 700 agricultural workers were engaged in milk and a few in egg production. In 1963 these two commodities represented 50 percent of the total value of the state's agricultural output, of which the Matanuska-Anchorage area contributed nearly 80 percent, valued at about \$2.0 million.

Beside agriculture, coal mining is the only other major economic activity in the area, employing in August 1964 some 110 workers. A large proportion of this coal is consumed by the military installations in the area, principally for space heating. With recent discoveries of natural gas there is some apprehension in the community that this new and potentially low-cost fuel may adversely affect the coal mining industry. Construction of a mine-mouth electric generating plant is being considered which would give the needed stability to this industry.

In a conference with some dozen agricultural and civic leaders in the community various projects were discussed for stimulating local economic growth. The following appear to offer promising opportunities.

1. Food Freezing Plant

In the past, several proposals have been considered for establishing a food freezing enterprise in Palmer. Application for an Area Redevelopment Administration grant for a feasibility study by the U.S. Agricultural Experiment Station has been pending for some time, but it was agreed that the original proposal was somewhat unrealistic and that the project should be scaled down to include only four or five types of products. These are the T.V. dinners, stew-pack, peas, broccoli, and cauliflower. A very large Anchorage food distributor is expected to become one of the principal investors in this enterprise, so that effective marketing channels are already assured. Several local farmers would probably also become shareholders and it was generally agreed that local meat and vegetable supplies were more than adequate.

According to United States Department of Agriculture experts, the minimum economic size plant for frozen T.V. dinners is about 2 tons or 4500 units of finished products per day, requiring about 14 production workers working on a single-shift basis. Total investment for such a plant in Ohio is roughly estimated at about \$75,000, of which heating and cooking equipment would be \$20,000, the freezing unit \$12,000, and a heated building of 12,000 sq. ft. at \$15/ft. about \$18,000. In Palmer these costs would be perhaps 20-30 percent higher. A plant of optimum economic size would be able to produce 8 tons or 18,000 units per day.

The Anchorage area market, with current population of more than 100,000, could certainly support the minimum size plant and might even in a short time sustain the optimum size unit. With the stew-pack and other items suggested above, with adequate raw food supplies, and assured distribution channels, it seems clear that the suggested food freezing plant in Palmer would offer a promising investment opportunity. As the initial step, the community is expected to obtain a modest technical assistance grant to hire the U.S. Agricultural Experiment Station to prepare a quick feasibility study and determine the scale and the profitability of this proposed food freezing enterprise. We strongly recommend its prompt approval.

2. Hay Raising Operation

Hay and other cattle feed are major cost factors in local milk production and their price to Matanuska Valley farmers vitally affects the growth of the dairy industry. According to information supplied by local farmers, imported hay prices in the area range between \$65 and \$90 per ton, some \$30 of which represents transport charges by hay barge between Prince Rupert and Anchorage. The short Alaskan grazing season, in addition, requires much larger hay and feed consumption per cow than in the Northwest, which competes for the Alaskan milk market. While transport costs are expected to decline in the future, even a \$10 per ton hay price differential between Seattle and Palmer, on top of other cost factors, would make it difficult for Matanuska Valley dairymen to compete with imported products.

Because of the short growing season and drying problems, present small-scale hay production in this area is very expensive. Even a relatively large farm of, say, 300 acres needs much specialized equipment which can be used only for a small part of the year. As a result the ratio of capital investment per bale of hay is very high. The high capital requirement, coupled with an 8 percent interest rate, makes it difficult for local farmers to compete with imports, even with the high transportation charges on the latter, thus impeding the growth of Alaska's agriculture. To alleviate this situation consideration is being given to the organization of a local corporation in which shares will be held by Matanuska Valley farmers, the State of Alaska,

and other investors. This corporation would assemble a large tract of land, of about 5000 acres, buy modern equipment, and begin hay raising and processing operations on a factory scale. While a great deal of study is needed to ascertain the feasibility of this operation, especially with the possibility of using local coal or piped natural gas for drying purposes, and agreements on the form of management, most of the dairy farmers we talked to seem to feel that this might solve their feed problem. Since any stimulant to the growth of local agriculture would bring material benefits to both employment and income in the Palmer area, this type of enterprise merits support.

Fairbanks

In April 1964, according to University of Alaska estimates, Fairbanks had 15,000 people within its city limits and some 40,000 in its larger trading area. Although not located in the South Central region affected by earthquake damage, it was included in this survey because existing railroad connections link its economy closely to the South Central region. It is, moreover, the second largest population center in the state, with high and persistent unemployment problems. In April 1964 more than 10 percent of its civilian labor force was unemployed. About half of some 11,000 jobs in its labor market area were provided by various government agencies. Among the non-governmental activities, manufacturing and mining each provide less than 5 percent of total jobs. Trade provides most jobs, with services and transportation next in importance.

In interviews with about a dozen community and business leaders, including the University of Alaska president and two of its professors, the following projects were identified as meriting serious considerations.

1. Electronic Parts Manufacturing and Servicing Operations

Because of the extensive military communication system in this Arctic Circle area, involving hundreds of millions of dollars of electronic equipment, the Radio Corporation of America is the largest civilian employer in the state. Its 4000-odd labor force is engaged principally in the installation and servicing of different communication systems. Both the Federal Aviation Agency and Weather Bureau also maintain extensive communication

systems and, of course, household radio and TV sets provide additional markets for parts and technical repair services.

There is a small business in Fairbanks, now servicing household radio and TV sets, which desires to expand its operations by purchasing grinding equipment for optical parts, machines for rewinding motors, test instruments for radarscope calibration and other specialty devices. They need some \$75,000 for this modest expansion, which would provide an additional 5-10 jobs. Subject to market, product and cost analysis and to managerial competency of the company, we recommend that this financial assistance be provided.

But, in light of the very large opportunities for manufacturing simple replacement parts and providing service skills, a much more ambitious operation is recommended. Some professional back-stop for such an operation appears to be readily available among the engineering faculty at the University of Alaska. Since electronic parts, repair and maintenance could develop into a major industry, the necessary import of special technical and managerial skills would not be expected to present a serious problem. Full cooperation of different Federal procurement agencies is, however, essential to the success of such an operation.

The following steps in appraising the feasibility of this project are suggested:

a) From various parts catalogues and parts replacement information available from Federal procurement agencies select a few simple components such as resistors, condensers, coils, and similar items and ascertain their types, sizes, and current volume of consumption in Alaska.

b) Using the same sources also ascertain the current volume of repair and servicing business provided by outside concerns.

c) On the basis of such market information determine the scale and type of operation that should be undertaken initially, and the amount of investment and skills needed.

d) Prepare a prospectus on the feasibility of such an enterprise, obtain conditional commitments from procurement agencies regarding the type and volume of business they would

provide, and apply for private or government loans needed to finance the operation.

2. Center for Alaska's Centennial Celebration

The occasion to be celebrated is the U.S. purchase of Alaska from Russia in 1867 for which center the land has been already purchased by the Frontier Society. A state bond issue of \$1.5 million to construct a permanent building is now being planned. The Dean of the School of Mines of the University of Alaska and other key men in the community are actively behind this project. A series of temporary exhibits and a permanent museum are being planned. For various permanent installations the committee in charge of this centennial expects to seek financial assistance from public and private agencies. A work force of about 20 will be needed to man the permanent exhibit and museum facilities relating to various Arctic sciences, which being at the gateway to Alcan highway are also expected to attract additional tourist trade. In addition, during the celebration it is expected that several hundred temporary jobs will be created. As a lasting contribution to the local economy, support of these endeavors is recommended.

3. Gold Mining Enterprise

An experienced mining engineer has done a great deal of research on new gold mining methods in the Chandler area north of Fairbanks. Claims are made, and apparently supported by the Dean of the School of Mines, that these new methods could become profitable even though large-scale gold mining in Alaska has practically ceased. A great deal of money is reported already to have been invested in exploration work. To get the project underway some \$750,000 more will be needed. We recommend that a detailed feasibility study be undertaken to assess the profitability of this project.

Valdez

Valdez is located in "Alaskan Switzerland" which is in the northeastern corner of Prince William Sound. It is a small fishing port with a year-round population of about 600. The town was severely damaged by the March earthquake, and entire dock area was submerged, with a loss of 30 lives. The entire harbor and half of the downtown business district were devastated.

The small-boat harbor, fuel storage tanks, the piers, and nearly the entire fishing fleet were also destroyed. Recent studies by U.S. Corps of Engineers, indicating that further sinking of the coastal area is probable, caused the abandonment of the present site and a plan to relocate the entire town along the coast some $4\frac{1}{2}$ miles to the north. According to the U.S. Office of Emergency Planning, nearly \$6 million in Public Law 875 funds are expected to be made available for essential public facilities at the new townsite, and another \$2.2 million for building a new small-boat harbor.

There are no separate statistics for the town, but average 1963 employment in the Valdez-Chitina-Whittier Labor Market Area, according to data from the State's Employment Security Division, was about 900. Of these, nearly 700 were engaged in non-agricultural operations and 370 worked for various government agencies. About 9 percent of the area's labor force was reported as unemployed. Although manufacturing employment for 1963 averaged only about 30, in June there were 100, and in July and August about 200 such jobs available in this area, nearly all in the fish processing industry. For the salmon season, about an equal number of fishermen were also engaged.

Fishing and tourism appear to be the most promising opportunities for the future economic growth of Valdez. In conversations with local officials and business men, it was found that detailed plans have been developed for building the entire town. The most prominent structure will be a large hotel, designed in the style of a Swiss chalet, and located on a rise commanding a beautiful waterfront view. It will be a major local tourist facility and is expected to provide, during tourist season, up to 50 new jobs. Among other projects designed to create new jobs and discussed with local business men and public officials, the following appear to be most promising:

1. Sea Food Freezing Plant

As in every other fishing area in Alaska, sea food processing facilities are essential for the growth of local economies. Freezing plants and cold storage facilities would not only extend the length of the normal fishing season and create more jobs, but by permitting the catching of a variety of

other fish besides salmon, which is now usually canned by non-resident seasonal workers, and by providing storage facilities, they would also tend to stabilize fish prices. This price stability is regarded as an important economic gain to fishing communities, because it would ease the pressure on local fishermen who are often forced to sell at whatever price the buyer offers or take the risk of their entire catch being spoiled.

The Valdez group interested in constructing the sea food freezing plant is considering using a new "liquid nitrogen process," involving the use of a Cryo-Vac unit for quick-freezing fish under high vacuum in plastic bags to form a second skin. By instant "flash" freezing at temperatures below -300°F and in association with liquid nitrogen it is claimed that frozen fish filets retain their freshness and would command premium prices. Part of the facility is also expected to be used for storage purposes as well as to manufacture ice to be sold to local fishing boats. Tentative estimates by prospective investors place total investment needs at \$200,000 with a potential labor force of about 10. A detailed feasibility study to ascertain markets, scale of operation, and profitability of the enterprise is strongly recommended. A modern sea food processing plant in Valdez is essential to replace the facilities destroyed by the earthquake.

2. Floating Boat Repair Shop

In addition to freezing and cold storage plants, small-boat repairing facilities are essential for all fishing areas in Alaska. Without such facilities any boat that has its gear or engine damaged has to sail or be towed to Seattle for repairs. Considering that it takes two weeks' time to make the round trip, this represents a serious economic loss to the fisherman, especially during seasonal fish runs. Local boat repair facilities would reduce such losses, create new job opportunities, and bring additional income to the community.

A Tacoma, Washington, firm which specializes in small-boat repairs has designed a completely integrated floating repair shop and is interested in locating a branch in Valdez. Equipped with all the necessary machinery, supplies, crew, and office facilities, such a shop could accommodate

several small boats at a time. It would operate in several fishing communities in the Prince William Sound area and is expected to maintain year-round employment. Preliminary estimates indicate that the total investment would be around \$300,000 with 20-30 new jobs. With proper planning of the work load in different fishing areas and close cost control, this could become a profitable enterprise and its support is recommended.

Cordova

Situated on the eastern shore of the Prince William Sound, Cordova is also a small community with a year-round population of some 1200, where fishing and sea food processing are the mainstays of the economy. The March earthquake caused the shoreline to rise by about six feet and the tidal wave inflicted severe damage to salmon canneries, boats, sea food processing plants and other dockside installations. Because of the land rise, the Orca Inlet channel for a time became too shallow to handle large boats and the 100-boat, small-boat harbor also became unuseable. But the U.S. Corps of Engineers has restored all harbor facilities and four of the five major sea food processors were back in operation at the time of our visit at the end of September of 1964.

Salmon and Dungeness Crab are the major sea food resources in this area and the five processors who handled these products had peak-summer employment in 1963 of about 300 workers. Total summer-season employment in 1960 was close to 600, of which sea food processing represented about 50 percent, while the three major wholesale groups - retail trade, services, and transportation and utilities each employed some 10 percent. Because there is practically full employment in summer season average annual unemployment is difficult to estimate. The 1960 Census reported 59 jobless out of a total work force of 550.

As in most other fishing communities in South Central Alaska, there is urgent need for expanded cold storage and boat repair facilities. From our discussions with leading businessmen in the town, these two projects represent interesting investment opportunities and, if realised, would make a significant contribution to the future economic growth of the area.

1. Cold Storage Plant

At the time of our visit, leveling of the site was in progress at the northern end of the existing canneries. Plans were underway to provide several acres of land as a site for the city-owned cold storage plant and allied facilities and to induce private intreprenuers to manage and operate them. Since Cordova is a major fishing center, a fairly large plant is being considered, with an estimated total cost of over one million dollars, which would result in total direct and indirect employment in excess of 100 workers. An initial grant to the city for a feasibility study is recommended. Such a study should not only consider the immediate economic impact of these proposed facilities on the community but also look into long range prospects for increasing local fishing and sea food processing operations and for stabilizing prices. Possible effects of the proposed cold storage plant on lengthening the fishing season is another important aspect of such a study.

2. Machine Shop

For a large fishing community a well equipped and efficiently managed machine shop is essential, not only to repair boat engines and gear, but also to service the neighboring salmon canneries and sea food processing plants. With an active airport serviced by a variety of freight-handling devices, road building equipment, a sawmill, and some agricultural machinery in the general area, there appears to be enough local business to support a modern machine repair shop. Present inadequate facilities should be expanded to provide these services.

Availability of such local facilities would lessen Cordova's dependence on the Pacific Northwest or on Anchorage, where costly delays due to poor communications are frequently experienced. With the expected growth of the sea food processing industry in this area, the suggested machine shop represents an interesting investment opportunity. In addition to contributing to the stability of the local economy, it would also provide 10-15 new jobs.

Seward

Seward is located on the northern shore of Resurrection Bay, a part of the Kenai Peninsula. It has a year-round ice-free harbor and is the southern terminal of the Alaska Railroad. An 80-mile paved highway links it to the north with Anchorage. Before the earthquake the mainstay of its economy was ocean and rail transportation and fishing and sea food processing. Both of these sources of jobs were wiped out by the March earthquake and, except for reconstruction work, the local economy is almost completely paralyzed.

The earthquake caused massive destruction, resulting in 13 deaths. All the fuel oil storage tanks were destroyed and submarine landslides dumped some 4000 feet of waterfront, including almost the entire dock area, small-boat harbor and fish processing facilities, into the Bay. Alaska Railroad docks, roundhouse buildings, locomotives, and nearly 100 freight cars were washed away by 30-foot tidal waves. Total damage to publicly-owned state and local facilities was estimated at \$11 million, and to private industries and homes at \$4.5 million. Among the publicly-owned facilities, damages to port, streets, utilities, and public buildings was estimated at \$8.5 million. Nearly all of these facilities are eligible for repair and replacement funds under Public Law 875.

In 1963, some 3000 people resided in the Seward trading area. Seward has a much higher summer population because the area is used as the recreation center for the U.S. Army and U.S. Air Force establishments in the state. In 1963 some 35,000 visitor days were provided by military personnel. The population of the city proper actually declined between 1950 and 1960, from 2100 to 1900. In August 1964 the Seward Labor Market Area provided about 1200 jobs, or practically the same as in the preceding year. Composition of employment was, however, quite different. This year (1964) there were some 340 more construction workers than in August 1963 engaged principally in rebuilding the waterfront. And because of cessation of all transportation activities, there were 250 fewer transportation jobs available. Government employment of 330 was up by 60 in comparison with that of 1963, and in August of 1964 represented a third of all non-agricultural wage and salary workers in the area.

At the time of our visit in September 1964, reconstruction was going on at a fast pace. Repairs to the city's hospital and public schools were nearly completed and much activity was in evidence in connection with water, sewer, and street repairs. Although, in comparison with 1963, retail business declined by 50 percent, unemployment was at a low level, principally because all dock and transportation workers left the area and the high level of construction provided jobs for others.

But in the post-reconstruction period the prospects for new jobs are not promising. Some of the oil companies have already built new storage facilities in Anchorage and are not expected to return. Since the earthquake, all ocean freight formerly going through Seward has been diverted to Whittier and Anchorage and part of it is not likely to return. Moreover, the new port facilities will be likely to mechanize many jobs which were formerly held by dock workers, so that future longshore employment is expected to be cut in half. Reconstruction of Alaska Railroad facilities with an estimated \$10 million in expenditures will continue to provide many jobs for the next 2-3 years, but after this is completed many fewer jobs than formerly are expected to be available for the operation and maintenance of these facilities, because modern technology will have made such jobs obsolete. A local orphanage, called The Jesse Lee Home, which provided about 15 jobs is expected to move to Anchorage.

For the purpose of identifying the type of activities which would stimulate economic growth in the post-reconstruction period, meetings were held in Seward with the local chairman of the Overall Economic Development Committee as well as with businessmen, bankers, and city officials. Several projects were mentioned as offering promising investment opportunities including a paper mill, smelter, food specialties, tourism, barite processing plant, small-boat repair facilities, and a sea food processing plant.

Tourism appears to be especially promising, but new facilities are needed to accommodate the visitors. Expected reconstruction, with modern facilities, of the Air Force Recreation Center will probably provide about 20 year-round jobs and 40-50 at the peak summer months. But new fishing and fish processing facilities, according to all those interviewed in Seward, seem to offer the

most promising job opportunities. A small barite processing operation which was planned to be constructed before the earthquake also seems like a good possibility.

1. Fish Freezing Plant

The tidal wave wiped out a modern freezing plant jointly owned and operated by the Halibut Producers Cooperative and the Alaska Shrimp Co., Inc. All of the equipment and buildings were swept out to sea together with the piers and no trace of the former processing facilities are now visible. The plant employed between 100 and 150 seasonal workers in its processing and storage facilities. About the same number of fishermen were also employed in catching the fish which was processed at Seward. This enterprise had developed the so-called frozen "shrimp loaf" which was especially suitable for use in Chinese food outlets. The "loaf" was successfully marketed through a large Biloxi, Mississippi, shrimp distributor and appeared to have considerable potential for expansion. Besides shrimp, the plant also handled halibut, salmon, and other catches.

At the time of our visit we were informed that the Halibut Producers Co. has applied to the Small Business Administration for a "disaster loan" and plans to come back to Seward. By re-establishing their former operations in modern facilities this enterprise will be expected to provide over 100 jobs which would be a major contribution to the local economy. Speedy rebuilding of the municipal pier on which this freezing plant will be constructed, and the raising of some \$500,000 of needed investment funds to purchase equipment and construct buildings are essential if Seward is to regain any semblance of a viable economy.

2. Barite Processing Plant

As the major ice-free port in South Central Alaska, connected by a paved highway with the oil fields some 50-80 miles distant in Western Kenai and Cook Inlet areas, Seward appears to possess locational advantages for a year-round barite processing operation. A substantial market for drilling mud is already available in this area and trucking it from Seward to various oil fields would not appear to present a problem. The Alaska Barite Inc. which

is planning to build the processing facilities expects to import the raw ore from South Eastern Alaska, do the milling and processing in Seward, and distribute its products to various drilling contractors. Processing and trucking operations are expected to provide 20-30 new jobs. As these jobs would be quite important to the local economy this project should be given serious consideration.

3. Food Specialties Enterprise

According to local business men the availability of wild berries in the Kenai Peninsula, and the possibility of preparing special varieties of smoked salmon, deer meat, moose sausage, and other types of game, offer another opportunity for a profitable enterprise. It is believed that a small-scale operation producing exotic food products for the high-price trade could be successfully organized and operated on a year-round basis. With the eventual availability of frequent sailings from Seward and expected low return-cargo freight rates, exports of such specialties to all U.S. markets would appear to be feasible. Further study of this project is recommended.

Kodiak

The city of Kodiak is located on the northeastern shore of Kodiak Island overlooking Chinook Bay, some 250 air miles southwest of Anchorage. As it lies in the path of the warm Japan Current, the average temperature of January - its coldest month - is about 30°F and of August - its warmest month - 55°F. This relatively mild climate distinguishes Kodiak community from most other South Central areas and permits many more year-round economic activities than can be carried on in any other city covered by this survey. Fishing, sea food processing, and beef-cattle grazing can be carried on for 10-12 months of the year. Its tourist season is also longer than that of other communities in this part of Central Alaska.

In addition to its climate and a beautiful natural setting, probably comparable with the most attractive tourist spots in the world, Kodiak is the home port of the famous King Crab and is claimed to be in the center of the richest sea food resources found anywhere. Halibut, shrimp, clams, herring, and a

large variety of bottom fish have been found in this area in enormous quantities. A large airport located only a few miles from the city provides easy transportation to both Anchorage and Seattle, with a good schedule of service to both cities.

During the March earthquake the city was severely damaged, with 19 persons dead or missing. Underwater seismic shocks caused the land mass to sink by some five and a half feet, and a 30-foot tidal wave, according to a report by the Office of Emergency Planning, "flung fishing vessels over the harbor's stone jetty, and sometimes two or three blocks into the city. Benson Avenue, Kodiak's main street, was a jumble of overturned boats and crippled buildings. Shore roads, canneries, processing plants, harbor and dock facilities, public buildings and utilities were damaged . . . Only 41 out of the fleet of 100 fishing boats have been accounted for and 12 of these were damaged beyond repair."

Damage to private property was estimated at \$2.75 million and involved 36 residences and 67 commercial establishments. An additional \$3.2 million in damage was inflicted on public facilities eligible for repair and replacement under Public Law 875. Because of excessive damage to the Central Business District, present urban renewal plans call for the development of some 35 acres. Approximately 140,000 sq. ft. of commercial floor space will be developed, of which 93,000 sq. ft. will be for replacement of existing or damaged facilities and the rest will be for future expansion. A new 65-room hotel is included in the proposed community renewal plan.

The city's population, excluding military personnel, has grown from 860 in 1939 to 2630 in 1960, and, according to the city manager's estimates, was about 3500 in September 1964. In the entire trading area, which comprises Election District #11, the growth has been from 2100 people in 1939 to 7200 in 1960, and probably about 8000 in 1964.

Total non-agricultural employment in August 1964 in the Kodiak Labor Market Area, according to the State's Division of Employment Security, was 2560, up about 120 from August 1963. An increase of 180 construction workers engaged principally in the rebuilding of the town, and a slight decline in fish processing and transportation activities, accounted for this change.

Employment in trades, services, and government activities remained about the same, and the last category represented, in August 1964, more than a third of all non-agricultural jobs in the area.

Other indices also show rapid growth. Scheduled airline passengers in the fiscal year June 1963-64 numbered 35,000, or more than double those in June 1961-62. Vessel traffic increased from 38,000 tons in 1960 to over 80,000 two years later. For the 4-year period 1960-63, total volume of business (excluding small businesses with gross incomes of less than \$25,000, and sea food processing industries) rose from \$6.3 to \$9.7 million. In the same 4-year interval, production of King Crab rose from 14 to 41 million pounds and electric power consumption from 7 to almost 9 million kilowatt hours. The canned salmon pack also nearly doubled, from 443,000 cases in 1960 to 867,000 in 1963. During the same four years the halibut catch increased from 40 to 45 million pounds. The very substantial growth of the fishing and sea food processing industry was not entirely reflected in similar increases in year-round jobs, principally because many salmon canners import seasonal workers who leave the area after the pack is completed. The large increase in King Crab production has, however, added stability to local employment, and both fishing and processing operations are at present carried on for some 10 to 11 months each year.

At the time of our visit in late September, Kodiak's economy was buzzing with activity, chiefly because of extensive reconstruction work. All those able to work were employed and help-wanted signs were seen at the windows of the State Employment Office, a rare sight in South Central Alaska. But in discussions with local business leaders and city officials, it was soon discovered that much needs to be done in order for the fishing and sea food processing industry to grow. By destroying boats, harbors, and sea food processing facilities, the earthquake has seriously crippled the economic growth of this area. Future economic growth may also be hampered by power and water shortages and the city's management will have to carry a very large financial burden for the expansion of these needed utilities. Lack of housing and problems of securing land are also critical factors that tend to impede growth.

Much needs to be done to realize the very substantial potential of this area and to make available its full contribution to the economic development of the entire South Central region for which the city needs outside financial assistance. Among the many projects discussed with local officials, bankers, and businessmen, the following appear to be of special significance:

1. The Passenger Ferry Dock

The recent inauguration of the ferry system which links the entire South Central region from Kodiak to several Kenai Peninsula ports and thence to Anchorage, will be of considerable economic significance for this region. During the summer months the ferry has already become an important tourist attraction and at all times it serves as a means for transporting goods. The remoteness of Kodiak from other populated communities in South Central Alaska has in the past inhibited the growth of its trade and commerce because air freight is generally either very expensive or not suitable for handling certain types of cargo. Kodiak beef, for instance, if properly processed, can have a substantial market in Anchorage and the new ferry system is expected to encourage such inter-city trade.

The sole municipal dock now in existence is already overloaded with four sea food processing plants and two warehouses. Most of these facilities are operating around the clock and queuing of cargo or fishing vessels in the harbor is occasionally necessary while awaiting dock space. Use of the existing facility for ferry-boat docking would tend to disrupt seriously the local economy since nearly all economic activities in the city are being performed in this area.

The proposed ferry dock will be located in the center of the town, only 2 to 3 blocks from the new Central Business District, and will be very convenient for tourist trade. An engineering firm has already prepared the pier design under contract from HHFA Community Facilities Administration, with an estimated cost of the entire project of about \$250,000. When completed, the dock is expected to provide 6 direct jobs and more than 50 indirect ones. The latter would be created by increased tourist potential and added facilities for handling commercial freight. We were informed

that an application for financial assistance is now pending with Area Redevelopment Administration, and in view of the considerable stimulant that this new dock would provide for increasing tourism and trade, its support is recommended.

2. Slaughtering Facilities

Because of favorable climatic conditions and good pasture available on an almost year-round basis, Kodiak Island could develop a sizeable beef-cattle industry. Home grown beef would in turn tend to lower meat prices and living costs in other parts of South Central Alaska and, by reducing imports, create new local job opportunities. We were told that at present there are between 2000 and 3000 head of livestock on the island, of which at least 300-400 steers can be ready for butchering each year. But because of lack of proper slaughtering facilities, all the beef consumed by the approximately 3000-man Naval Station (located only a few miles from the cattle ranches) is imported from Seattle. For civilian markets in Anchorage, some meat comes from New Zealand. Meat grading and inspection are required by all Federal procurement agencies and the primitive slaughtering and processing facilities now available to local ranchers cannot meet such standards.

Since there is a very large market for beef for both military forces and civilians in all parts of Alaska, the development of this industry on Kodiak offers promising investment opportunities. The recently-inaugurated ferry service linking Kodiak with Anchorage could play a key role in the distribution of meat to the various communities in the area in which live nearly half of the state's population.

In our discussions with members of the Kodiak Livestock Growers Association, Inc., it was tentatively agreed that this group would form a corporation for the purpose of erecting and operating small but modern slaughtering and possibly freezing facilities. Among the various locations mentioned was a surplus warehouse belonging to the Naval Station. Before the decision is made, however, on the kind and location of slaughtering facilities to be established, a technical study is required to analyse the scale and economics of operation as well as the needed standards to meet

Federal buying specifications. Once arrangements are completed to sell beef to the Naval Station and to other Alaska outlets and the distribution is thus assured, the next step is to raise the necessary capital, build the required facilities, and hire competent management to operate them. With an assured livestock supply which has a potential for substantial expansion, and a large and accessible market, this operation appears to offer a promising investment opportunity.

3. Expansion of the Municipal Dock for Cargo Handling and Sea Food Processing Facilities

This is another public facility whose expansion would materially stimulate Kodiak's economic development. Practically all sea food processing activities, as well as cargo handling and warehousing, are now being performed on the municipal pier, because it is the only area undamaged by the March earthquake. As the center of the community's economy, the pier is already badly overcrowded. Warehouse space appears to be inadequate to handle the present volume of cargo so that costly delays are experienced. Moreover, several canneries and sea food processing concerns, including some whose plants were destroyed by the earthquake, have expressed a desire to locate in Kodiak and need waterfront space.

Two large sea food processing plants are planning to return to Kodiak and as of the end of September 1964 arrangements had been made for waterfront locations in the Near Island Channel which they occupied before the earthquake. The Alaska King Crab Co. plans to anchor a barge on the city side of the channel and build its processing facilities there. Some few hundred yards away the Alaska Packers Association will also bring a Victory ship and, by sinking it along the shore line, install permanent processing facilities. These two installations are expected to provide between 200 and 300 jobs and would represent a considerable expansion of the local economy. Together with the ferry pier, these plants will nearly exhaust the waterfront space suitable for canning and freezing facilities. Moreover, even if space were available, many smaller sea food processors cannot afford to build their own waterfront sites and are anxious to locate on the municipal dock. For such enterprises, proximity to port warehouses and loading

facilities are essential both for handling the incoming raw fish and for shipping the finished product.

In discussing these industrial site problems with the Kodiak city manager and local businessmen, it was agreed that extension of the present municipal dock is the most economical method of creating new waterfront space in addition to the existing warehousing and cargo handling installations. Existing utilities, such as water, power, and fuel, can be expanded at this location to accommodate the needs of the new facilities at much lower cost than would be required anywhere else in the area, even if other waterfront sites were available.

The proposed dock expansion would involve an addition to its face of some 400-500 feet and a width of some 100 feet. With a fill area behind the dock, this would make available some 3 to 4 acres of land as sites for sea food processing facilities. The estimated cost for this expansion is about \$1.2 million. Present requirements for plants of the 3 firms which have already requested space amount to nearly one acre. The reserve space would be used to expand the present municipal warehouses, and would be expected to attract other new establishments. We believe this port expansion would be an important stimulant to economic development of this area and a potential source of several hundred new jobs. By leasing land to sea food processors, it would, in addition, become a source of income to the city for much needed municipal improvements.

4. Small-Boat Repair Facility

As a home port of several hundred fishing vessels, Kodiak could also support a boat repair facility and a small dry dock. A very convenient site has been partly developed for this purpose in the Gibson Cove some 2 to 3 miles southwest of the city. As indicated earlier, local repair facilities are essential for an isolated area like Kodiak. They would provide needed services to the hundreds of boats operating in the area and create additional employment and income in the community. A technical study is recommended to assess the market, size, and investment requirements of such a facility.

5. Marine Sciences Research Institute

According to information obtained in the course of this survey, many new and significant discoveries have recently been made in sea food resources in the Kodiak area, among which are shrimp, clams, abalone, and deep sea crabs. Local business men and city officials feel that other discoveries are imminent and that this entire area is a fertile field for systematic research in marine sciences dealing especially with the Arctic region. In addition to performing basic research in biological sciences, especially in discoveries of new species and their commercial possibilities, such an institute would also concentrate attention on the development of new technologies to advance the sea food industry. Developing programs and policies with respect to harvesting individual sea food resources, and thus reducing the seasonality of this industry, might be another important aspect of the Institute's work. A year-round sea food industry would contribute significantly to the growth of Alaska's economy, encourage locally-operated processing facilities, attract new migrants, and bring about stability in employment and income. Utilization of fish waste for food, chemical, and drug products, and for use in poultry and cattle feed, and possibly fertilizer, are other activities in which the Research Institute might be interested.

The suggested location for the research center (which would be a branch of the University of Alaska, similar to their present Arctic Research Institute) is the Near Island, right across the narrow channel from downtown Kodiak. It is a superb site which could accommodate very large facilities, not only to house the laboratories and classrooms, but also as a convention center for scientific meetings dealing with the marine sciences and technology. In addition to providing Alaska with a center for developing one of its major natural resources, through special museums, exhibits, international meetings, and seminars it would also upgrade the cultural level of the area, become an important tourist attraction, and provide considerable local income and probably over 100 new jobs. A committee of the National Science Foundation, National Research Council, and some of the foundations operating in the various marine sciences field, might initially be set up under the sponsorship of the appropriate departments of the University of Alaska to study this

problem. Defining the scope of the Institute's research program, its type of management, and sources of financing would initially be the major task of such a committee. We recommend that the University of Alaska initiate a study of this project.

Kenai Peninsula Communities

Among the several communities visited along the western shores of the Kenai Peninsula only Homer and Seldovia were seriously damaged by the March earthquake. At Homer, a fishing community of about 1200 people located on the Kachemak Bay, the major damage was to the small-boat harbor. In Seldovia, which lies on the southern shore of this same bay, the earthquake caused the shoreline to sink by about 3 feet, thus lowering the break water and exposing the small-boat harbor to greater wave action. The other important town in this area which was not damaged by the earthquake is Kenai, a community of about 1500 people located on the eastern shore of the Cook Inlet and some 80 miles south of Anchorage. Although no unemployment data are available for individual communities it has been appreciable in the past several years.

In all these towns expansion of sea food processing and boat repairing facilities (including oil drilling barges) appears to offer promising investment opportunities. Beef and hog raising and slaughtering, as well as egg production, also offer similar possibilities for economic growth. With the large Anchorage market for these products, the present very limited activities could be greatly expanded.

In discussions with local business men in Kenai and Anchorage during our September 1964 visit, two additional projects were suggested which merit serious consideration. One is a greenhouse for tomato growing and the other a sawmill.

With the expectation of using the exhaust heat from a local power plant, a one-acre greenhouse is being considered by certain Anchorage business men. Except for balancing the advantages of substantially lower fuel cost at Kenai against the disadvantages of high transport costs to deliver tomatoes to Anchorage, this project is similar to the one described earlier in this dis-

cussion. But the Anchorage market could, in all probability, support two small greenhouses. Subject to a feasibility study dealing with its profit-making potential, establishment of such a competitive facility might be desirable.

Three local business men were interested in building a sawmill and dry kiln in the Kenai-Soldatna area. Discussion with two of the principals indicated that certain machinery has already been purchased for a sawmill of 50,000 board feet per-day capacity, and that its owners are competent technicians with ample experience in sawmill operations. They claimed that local oil-drilling contractors have indicated interest in making sizeable lumber purchases and, of course, the Anchorage market could absorb a great deal of the mill's output. Raw logs would be towed from across the Cook Inlet and arrangements are being made to purchase them from the Federal government at very favorable stumpage prices. Approximately \$200,000 of additional capital is required and 15-20 jobs would be created.

But as is the case with other small lumber mills in South Central Alaska, this group lacks marketing and selling experience. As was indicated earlier, to operate a sawmill and market lumber successfully in this area, some sort of cooperative arrangement might be necessary. Most of the people in the lumber business seem to be good technicians but inexperienced marketers so that skilled management is required to develop effective distribution channels. Perhaps one way to provide such management is through a cooperative group supported by all sawmills in the area, similar, for instance, to the Sunkist Orange Association. Such a group would not only promote effective distribution but also establish quality standards. Lack of grading facilities by a recognized group represents the greatest difficulty. Housing and Home Finance Administration, for instance, according to local bankers, refuses to approve loans for homes built of ungraded Alaska-grown lumber, so that most of the wood used in housing must be imported from Seattle, despite the very large local timber resources.

SECTION IV. GENERAL OBSERVATIONS

In the preceding sections, emphasis was placed on investment opportunities consisting principally of short-run projects that could be started in specific communities in the next 2-3 years to take up the expected slack in employment after the reconstruction job had been completed. If properly developed, some of these projects could bring lasting benefits to the Alaskan economy. The recommended research institute in marine sciences, for instance, could be quite helpful in charting a long-term program with respect to future development of sea food resources.

A more rational development of Alaska's sea food resources is, in our opinion, one of the most important problems facing the industrial planners and should command highest priority. Since in many respects these resources are unique, their development deserves special attention. Lengthening of the fishing and sea food processing season could in the foreseeable future create more local jobs, do more to attract new migrants, and bring about greater stability to local economies than would several hydro-electric or mineral industries projects that have been talked about in recent years. What is needed most (with respect to the fishing industry) is a careful and systematic study of how the available resources could be fully developed within the framework of Alaska's economic program. Development of floating canneries and freezing or cold storage facilities is one type of project that deserves serious attention. Marketing and packaging of salmon and other sea foods is another area for investigation. Such activities cannot be left to absentee owners whose main interests are not in Alaska but in the Pacific Northwest. Alaska-based organizations should be developed to do this, following the example set in the King Crab industry. This problem of marketing and promotion of sea food products by local business interests is crucial to the successful development and modernization of the fishing industry.

Development of local agriculture, including beef-cattle raising, on Kodiak and Kenai should command the next order of priority and is in our view another important program to be seriously considered in the future. Lowering of food costs is an essential first step in the reduction of living costs, which in turn can be of considerable assistance in making the products

of local industries more competitive with imports. As suggested elsewhere in this report, the eventual possibility of using natural gas for certain agricultural operations, like hay drying or fertilizer manufacturing, also presents interesting possibilities. Use of various types of heat energy in agriculture has been seriously considered by Scandinavian farmers and a study of their experience might prove useful.

The growth of the South Central oil industry is likely to be governed by the world supply and demand, and not much could be done in Alaska to stimulate its expansion. But liquefying natural gas or using it to produce ammonia - both for export to Japan - are projects which could be greatly stimulated with proper promotional effort. Since both iron ore and natural gas have been found practically next to each other in the Cook Inlet area, serious consideration should be given to employing recently-developed technologies for using gas to reduce iron ore. This would more than double its export value, in addition to creating some additional local employment.

Further development of forest resources also offers promising investment opportunities. However, from the information we have gathered, it is not certain that the South Central region could successfully compete with South Eastern Alaska.¹ In any case, what is badly needed is a better marketing organization for selling the lumber which is at present being produced by numerous small saw mills. Setting of quality standards to satisfy FHA specifications is another problem requiring immediate attention.

Finally, we believe that exorbitant land costs are a serious impediment to Alaska's economic development. When, according to information supplied by local citizens, a standard city lot in a small town like Kodiak or Soldatna costs more than it would in Washington, D. C., in an area less than 10 miles from the White House, there must be something wrong with Alaskan land prices. Such land prices make house construction prohibitively expensive and together with the high cost of living tend to discourage new migrants. We do not pretend to know the answer to this problem but feel that it deserves serious attention.

Expansion of tourism is another important stimulant to economic growth, but we found a well-developed state program and most people in Alaska aware of its potential, and it need not be stressed in this report. Since this is also a highly seasonal industry and its seasonality coincides with construction, fishing, canning, and other economic activities in Alaska, it creates relatively fewer year-round job opportunities per dollar of investment in comparison with most manufacturing industries. It may be mentioned, however, that the development of low-cost air group-rate fares, or the Alaska-Europe combinations mentioned earlier, especially from midwestern and eastern areas, might be a constructive step for increasing the tourist trade.

PENN STATE UNIVERSITY LIBRARIES



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